

sparsely beset with short white hair. Legs black. The four posterior tarsi faintly reddish at base. Wings: the crossband fills out the fourth and fifth posterior cells, thus reaching the posterior margin. (The fifth posterior cell is a shade lighter apically on one specimen). Both basal cells brown with a hyaline dash apically. Anal and axillary cells, anal angle and alula slightly shaded. A similar shade covers the apex. A halo follows the convex distal border of the crossband quite to the costa, thus separating the crossband from the apical spot which latter vignettes slightly into the second submargined cell. Anal cell closed.

This species resembles very closely *Chrysops pertinax* Williston, but will be distinguished readily by the heavy fulvous pile on pleura, like that of *celer*, by the crossband which reaches the posterior margin and the difference in the color of antennæ; besides this species has no sign of middorsal triangles on abdomen.

Described from four specimens taken at Brown's Mills Junction, N. J.

A New Genus and Species of Phalangida.

BY NATHAN BANKS.

Lately I have received from Prof. J. H. Comstock a phalangid sent him by Prof. Cooley of Montana. Prof. Cooley writes that it was taken in a cave near Limespur, Montana, at a depth of 190 feet, and a horizontal distance into the earth of about 1000 feet. It will constitute a new genus and species, its nearest allies being the two species of *Sclerobunus* found under logs and among fallen leaves in the northwestern States.

CYPTOBUNUS n. gen.

A Mecostethous Phalangid with a single, simple claw to tarsi three and four. Hind coxæ but little larger than the others, united to venter only at base; body broad; legs very slender, leg two plainly longer than four, but tarsus four longer than two; the tarsi only indistinctly divided into false joints, three in tarsus two, four in tarsus four, the basal one longer than others. Eye-tubercle rather large, not very high, rounded, with two large black eye-spots above. Palpi with tibiæ and tarsi depressed, and armed laterally with long, slen-

der spines, each spine consisting of a basal part, truncate at tip and a long terminal bristle arising beneath a short spur or apophysis.

Type *C. cavicolus*.

***Cyptobunus cavicolus* n. sp.**

Pale whitish hyaline, eye-spots black. Body but little longer than broad behind, sides slightly concave, anterior margin not one-half as long as posterior margin, surface uniformly, finely granulate; basal joint of mandibles rather long, porrect; the second joint has near base, as seen from above, a short spine on each side, fingers apparently simple. Palpi longer than body, very large and broad; the tibia and tarsus depressed, a rather slender tarsal claw; tarsus with four long spines on each side; tibia has

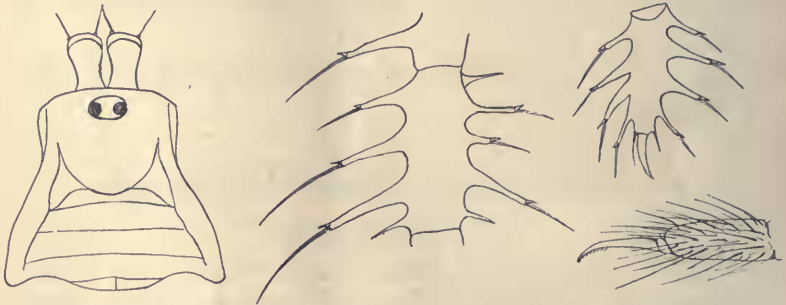


Fig. 1.—Body and mandibles Fig. 2.—*Cyptobunus*. Tibia and tarsus of palpus and claw of leg. *Cyptobunus*.

three long spines on inner side, and one short one, on the outer side three short and two long ones alternating; the patella has on inner side a long spine; femur above with two on outer side toward tip, two on lower inner side toward tip, several short ones above, and below in a row are three large, long spines, a small one, another large one, and then two small ones near tip. Legs slender, granulate, with many fine hairs, most numerous toward tip; femur one about as long as body is broad, with three long spines near base on lower side, one such on the trochanter, and two on coxa one; femur two plainly longer than body, tibia two about three and one-half times as long as the patella, and metatarsus two as long as the tibia; in very strong lights the tarsi show traces of further division, but it is not definite. Length 1.6 mm.

One specimen from a cave near Limespur, Montana. The general appearance of this specimen at once places it in the suborder *Mecostethi*, but it differs from all other species known in having a simple single claw to tarsi three and four. An

allied genus, *Sclerobunus*, has the single claw, but there is a spur or branch-claw on each side toward base. Such a branched claw has been found in several other Phalangids in various parts of the world. In the old classifications the *Phalangida* were divided into two groups, differing from each other by several important characters; one of these was that in the *Mecostethi* (Laniatores) there were two claws to tarsi three and four, while the *Plagiostethi* (Palpatores) had only a single claw. Now the discovery of these forms, which by nearly all structural characters belong to the *Mecostethi*, but have a single tarsal claw throughout, provokes discussion as to their systematic position.

Loman has proposed to elevate these forms into a new sub-order, the *Insidiatores*; and calls attention to some new points of difference, especially the peculiar kind of spines on the palpi. Pocock refuses to accept the *Insidiatores* as equal to the other two suborders, but keeps it as a superfamily in the *Mecostethi*. Most of the species of the *Insidiatores* come from Australia and New Zealand, a few from Madagascar and South Africa, one from Chile, and now three from the northwestern United States.

The fact that *Cyptobunus*, with its simple claws, is but a cavernicolous adaptation of *Sclerobunus*, with its branched claws, induces me to think that *Sclerobunus* is not far removed from typical *Mecostethi*. I would therefore place still less value upon the tarsal claws and consider them as only of generic value, and that the three forms of *Insidiatores* found in the northwestern States are more nearly related to the other *Mecostethi* of the neighboring regions than they are to the Australian phalangids having a similar claw-structure. Omitting the tarsal claws, *Sclerobunus* and *Cyptobunus* belong to the family *Phalangodidæ*, and possibly might form a tribe therein.

Thorell and Loman have divided the *Phalangodidæ* of Simon into three or more families, but in treating the species of the United States I do not think it advisable for our forms, and doubt if these families will hold good when the phalangid fauna of the world is more fully known to naturalists.